

AF/2800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Roland A. Wood
Title: IMPROVED BOLOMETER OPER. N USING FAST SCANNING
Docket No.: H0001512 (256.087US1)
Filed: March 6, 2001
Examiner: Shun Lee

Serial No.: 09/800366
Due Date: February 27, 2003
Group Art Unit: 2878



BOX AF
Commissioner for Patents
Washington, D.C. 20231

We are transmitting herewith the following attached items (as indicated with an "X"):

- ☒ A return postcard.
- ☒ Amendment and Response Under 37 C.F.R. 1.116 (21 Pages total, including Clean Version of Amended Specification Paragraphs (4 pgs.)).
- ☒ Clean Version of Pending Claims (7 pgs.).

Please consider this a **PETITION FOR EXTENSION OF TIME** for sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938, Minneapolis, MN 55402 (612-373-6900)

By: *Prakash Nama*
Atty: Prakash Nama
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: BOX AF, Commissioner for Patents, Washington, D.C. 20231, on this 21 day of January, 2003.

Anne M. Richards
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Anne M. Richards
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EXPEDITED PROCEDURE - EXAMINING GROUP 2878

09/800366

PATENT

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AMENDMENT & RESPONSE UNDER 37 C.F.R. § 1.116

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In response to the final Office Action mailed November 27, 2002, please amend the application as follows:

IN THE SPECIFICATION

Please make the paragraph substitutions indicated in the appendix entitled Clean Version of Amended Specification Paragraphs. The specific changes incorporated in the substitute paragraphs are shown in the following marked-up versions of the original paragraphs:

The paragraph beginning at page 2, line 24 is amended as follows:

In the prior art, one single bias pulse is applied to each microbolometer in the array in each frame time. Application of a single bias pulse in each frame time can result in a temperature increase in the microbolometer over and above the heating effect of the incident radiation. Since, by necessity, such bias pulses have to be much shorter in time than the frame time, the heating effect is very rapid. Thus, when one bias pulse is applied to each microbolometer in the array in each frame time, the temperature of the microbolometer can initially rise rapidly for a short time equal to the bias pulse duration, and then fall for the remainder of the frame time. The variation in temperature the signal level during each bias pulse due to the temperature rise and fall can typically be many times greater than the signals caused by the incident radiation. The electronic circuits receiving the signals must be designed to receive [possess] a much larger variation in signal [dynamic range] than would be required for the radiation signal alone. This adds to the difficulty in designing and operating such circuits.

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